

Next Generation Search Engines: Advanced Models for Information Retrieval

Preliminary Framework

(Can be changed if the chapters are removed or modified)

1. Pre-treatment
 - a. Ontologies
 - i. The Role of Ontologies for Structuring and Representing Data for Personalized information Delivery and Retrieval
 - ii. Fuzzy Ontologies Building Platform for Semantic Web : FOB Platform
 - iii. Ontology-based Expansion in Modern Information Retrieval Systems
 - b. Semantic Extraction
 - i. Searching and Mining With Semantic Categories
 - ii. A content Networking Primer
 - c. indexing text / image / music
 - i. Probabilistic Indexing Language
 - ii. Scientific data indexing and searching
 - iii. Large-scale visual content information retrieval
 - iv. Cube Index model for Text and Image indexing
 - v. Music indexing for the socio-semantic Web
2. Treatments, research and methods
 - a. Opinion and sentiment
 - i. Artificial Intelligence Enabled Search Engines (AIESE) and the Implications
 - ii. Intelligent semantic search engines for opinion and sentiment mining
 - b. Multilingual
 - i. A Comparative study for bilingual (Arabic / English) search engines for the Internet/Intranet using Natural Language Processing and Search Technology
 - ii. Crosslingual access to photo databases
 - iii. Mono-lingual and Multi-lingual Question Answering systems
 - c. Mobile
 - i. Context-Aware Personalized Approach for Mobile Search
 - ii. Context-Aware Mobile Search Engine
 - d. Question Answering
 - i. Human-Centred Web Search
 - ii. Using association rules for query reformulation
 - iii. Finding answers to factual questions, in text collection or Web, in open domain or specialty domains
 - iv. Question Answering
3. Post processing
 - a. Clustering
 - i. Extensions of Web browsers useful to Knowledge Workers
 - ii. Decentralized Search and the Clustering Paradox in Large Scale Information Networks
 - iii. For a better extraction of contextual semantic similarity: the N-LSA (Non-negative Latent Semantic Analysis)
 - iv. Next Generation Search Engine for the result Clustering Technology
 - b. Display results
 - i. Browsing Search Results with "Memory Islands"
4. Evaluations
 - i. Metadata for search engines: what can be learned from e-sciences?
 - ii. Information Searching and Browsing on the Internet: A user Perspective
 - iii. A Historical Perspective on Systems and Methods for Web Search Indexing
 - iv. Search in the legal Market
 - v. Evaluating Next Generation Search Engines
 - vi. The Multiples syntaxes of Search Engines on Cyberspace
 - vii. Evaluation methodology for Search Engines